

DIVISION 200 - EARTHWORK

SECTION 201 - CLEARING RIGHT-OF-WAY

201.01 Description This work shall consist of clear cutting, selective clearing and thinning, tree trimming, removing single trees, including dead, blown down or uprooted trees, removing and disposing of all stumps and debris within the limits of the right-of-way and easement areas except such objects as are designated to remain or are to be removed in accordance with other sections of these specifications. This work shall also include the preservation from injury to or defacement of all vegetation and objects designated to remain and the treatment of stumps with herbicides.

- a. Clearing shall consist of cutting and disposing of all trees, down timber, brush, bushes, and debris within designated limits.
- b. Tree trimming shall consist of removing any designated branches and other tree portions for preservation purposes.
- c. Selective Clearing and Thinning shall consist of cutting and disposing of designated trees, down timber, stubs, brush, bushes, and debris within designated limits. This work also includes application of approved herbicides on hardwood stumps.
- d. Removing trees shall consist of cutting and disposing of single trees, stumps and roots, located outside the limits of clearing or selective clearing and thinning limits, as indicated on the plans or as authorized.
 1. A single tree is defined as any tree or remains of a tree, still standing, 300 mm [12 in] or more in its average diameter measured, as specified in Subsection 201.09 - Method of Measurement, and taller than 1.5 m [5 ft] measured from the ground at the base of the tree.

2. A stump is defined as the remains of a single tree 300 mm [12 in] or more at its average diameter from which the toppings have been removed and which is less than 1.5 m [5 ft] in height measured from the ground at the base of the stump.

201.02 Materials Materials shall conform to the requirements specified in the following Subsection of Section 717.07 - Herbicide .

201.03 General The Resident will verify clearing and selective clearing limit lines and designated items that are to be preserved and to remain.

Unsound or unsightly branches of trees and shrubs, designated to remain and not specified to be removed under another item, shall be removed as directed. Branches of trees extending over the roadbed shall be trimmed to provide a clear height of 6 m [20 ft] above the road and shoulder surface. Trimming shall be done by skilled workers and in accordance with good tree surgery practices.

Alignment stakes, grade stakes, witness stakes, boundary markers, bench marks and tie points shall be preserved until permission is given for their destruction.

201.04 Clearing In areas indicated on the plans, all trees, down timber, brush, bushes, shrubs, plants and debris not designated to remain shall be removed and disposed of.

In areas where the proposed embankment is not designated to be grubbed, as provided in Subsection 203.09 - Preparation of the Embankment Area, all stumps shall be cut off as close to the ground as is practicable. When stumps are to remain in the backslope rounding of cut sections, they shall be cut flush with the final slope line.

All wood in the clearing area, except trees designated to remain, shall become the property of the Contractor, unless otherwise provided.

The Contractor shall take special care to completely dispose of all elm trees removed, by burning or by burying under soil in approved areas.

All live hardwood stumps, 25 mm [1 in] or more in diameter located between the lines of improvement and the outermost clearing or selective clearing lines shall be treated with an approved herbicides, unless specifically exempted.

In areas where stumps and shrubs are to remain, the surface of the ground shall not be unduly disturbed or compacted. Existing ground cover shall be preserved insofar as possible and the area shall be left neat and clean and in a condition that is reasonably consistent with the surroundings.

201.05 Selective Clearing and Thinning In order that trees may be properly marked, the Contractor shall give the Resident at least 2 weeks notice before starting work. Only those trees or bushes designated to be removed shall be cut. In no event shall selective clearing and thinning operations begin until approval is given.

All dead or diseased trees or shrubs, junk, trash, litter or foreign matter of any kind shall be removed from the areas to be enhanced. This shall include uprooted stumps and all branches, tops, trunks and dead wood, resulting from woodcutting operations or from any other causes.

Trees and shrubs to be preserved shall be carefully pruned to remove all dead, diseased and injured wood. In addition, in certain areas, the Resident may require the branches of designated trees to be removed to a height above ground as directed. Complete clearing may be required in certain areas. Such clearing shall be included under this Subsection. Storing logs and pulpwood in thinned areas shall be avoided.

The Contractor shall avoid disturbing or compacting the existing ground surfaces as well as avoiding damage to plant growth. The use of heavy equipment, operating anywhere within the area to be selectively thinned, will not be allowed unless authorized.

Any injury to trees and shrubs that are to be preserved shall be carefully repaired. Disturbed ground surface shall be restored as nearly as possible to natural conditions.

Pruning and repairs to live trees and shrubs shall be done by skilled workers or tree surgeons according to approved arboricultural practice. All stumps, new or old, shall be cut off as close to the ground as is practicable.

Trees falling outside the specified limits of the thinning areas shall be removed and disposed of in a satisfactory manner. Undesirable trees leaning or falling over the highway right-of-way from outside shall be cut at the property line.

201.06 Herbicides All herbicides shall be approved by the Department of Transportation Landscape Architect. The herbicides shall be applied by Certified Pesticide Applicators in accordance with State Pesticides Control Board Regulations. With the exception of coniferous (softwood) trees, stumps over 25 mm [1 in] in diameter resulting from cutting live hardwood trees and shrubs shall be treated with approved herbicide spray mixture. The spray mixture may be applied at any time until regrowth from the stumps has reached a height of approximately 600 mm [24 in] except that it shall not be applied when the stumps are wet or frozen. The herbicide spray mixture shall be sprayed on all exposed surfaces of stumps and the stems of regrowth, until there is complete saturation and run-off. Particular attention to coverage shall be given to the bark and all exposed roots.

All stumps shall receive at least one treatment with the herbicide spray mixture. At the time of final acceptance, live regrowth of hardwood tree seedlings shall have been substantially eliminated. Any remaining regrowth will require another treatment before final acceptance.

Particular care must be taken that the herbicide mix does not come in contact with or too near live trees and shrubs that are to be preserved. Unless otherwise directed the spray mixture shall not be applied closer than 600 mm [2 ft] from the

trunk of a tree that is to remain.

When directed, live stumps in specified areas shall be exempted from spraying with herbicides.

The Contractor shall be responsible for maintaining the treated area until final acceptance of the work. All damage or dieback shall be repaired at the Contractor's expense as directed. At the time of final acceptance the area shall be free of all dead, dying or damaged trees and shrubs and litter of any kind as well as free from regrowth.

201.07 Disposal All brush, timber, logs and other woody debris shall be disposed of by approved methods. The Contractor shall make every effort to provide useful disposition of woody material that may be marketable. If the Contractor can demonstrate that a reasonably suitable market for the material is not available, other disposal methods may be approved.

Acceptable methods of disposal may include chipping, grinding, and burying. Burning may be allowed when so provided by Special Provision.

a. Chipping Wood chippers shall reduce woody material to chips, not over 6 mm [$\frac{1}{4}$ in] thick by not over 200 mm [8 in] long, and the chips shall be spread uniformly over the ground or as directed. For a related provision, see Code of Maine Regulations 401 Section 7.

b. Burying Brush and logs may be disposed of by burying in approved waste dumps or by placing in the portion of the embankments outside a slope 1 horizontal to 1 vertical extending from the edge of the shoulder to the existing ground and covering with a minimum of 600 mm [2 ft] of earth. Excavation or borrow used to cover the brush and logs in the slopes may be placed in layers at least 600 mm [2 ft] thick and compacted only to the extent that the stability of the slope is assured. For a related provision, see Code of Maine Regulations 102 Section 3.

c. Burning A Special Provision will state when burning is allowed.

Logs, brush and other refuse produced as a result of clearing, may be disposed of by burning, provided pollutant type material is not used to start or maintain the fire. All fires shall be started with natural material and the fire maintained in such a manner that minimum of visible smoke is produced.

Special attention shall be given to wind direction to assure no nuisance results from smoke. Burning shall be done in accordance with applicable laws and ordinances and under the direction of competent workers. Extreme care shall be taken to control the fires. Fires will not be allowed where there is any possibility of burning, scorching, overheating or otherwise jeopardizing trees, shrubs, surrounding forest cover, adjacent property or buildings nor where there is a possibility of damaging overhead wires and cables. Fires will not be allowed where undisturbed ground is to remain exposed nor on areas which have been seeded to grass or other plants.

The Contractor will be held responsible for any damage caused by fires built in the construction of the project. Such responsibilities shall include removing and disposing of burned material, replacing trees, shrubs, fences or any other material or object which has been designated to remain and seeding, fertilizing and mulching the burned areas. At the option of the Resident, a cash settlement or a combination of replacement and cash settlement may be assessed in lieu of replacing all damaged trees and plants. When directed, the Contractor may be required to perform such work beyond the Right-of-Way lines.

201.08 Removing Single Trees and Stumps When called for on the plans or otherwise designated, complete removal and disposal of single trees and stumps shall be required and shall include the backfilling of stump holes.

Trees, which have been uprooted, shall be removed by cutting the tree and removing the stump from the ground or, where approved, the stumps may be placed back in the hole to present a natural appearance. The area shall be graded to conform to the surrounding terrain.

201.09 Method of Measurement Clearing, and selective clearing and thinning will be measured by the hectare [acre], determined from horizontal dimensions, acceptably and actually cleared or thinned within the limits shown on the plans or additional areas flagged by the Resident. Areas not shown on the plans or not flagged for clearing or thinning will not be measured for payment.

As an alternative to field measurements, the Contractor and the Resident may agree in writing that the acreage acceptably cleared for payment will be that shown in the Schedule of Items. If such an agreement is reached, no further measuring and computing of quantities will be required and the quantity referred to herein will be final.

Single trees and stumps will be measured by each unit. The size of the tree shall be the average diameter determined by circumferential measurement at a height of 1.4 m [4½ feet] above the ground. When trees are removed under this contract and the removal of the stump is required, the stump size shall be the same size as that determined for the tree. The size of all other stumps shall be the greatest horizontal cross sectional dimension determined at the top of the stump. Trees or stumps, which have multiple trunks protruding from a single base trunk, shall be measured for payment as a single tree or stump.

Individual trunks of multiple trunk trees or stumps having a diameter of less than 300 mm [12 in] will not be included to determine the size of a tree or stump.

201.10 Basis of Payment The accepted quantities of clearing, selective clearing and thinning will be paid for at the contract unit price per hectare [acre].

The accepted quantity of single trees and stumps removed will be paid for at the contract unit price each. Payment for trees shall include removal and disposal of the entire tree except stumps.

All stumps, as defined in Subsection 201.01 d.2 and designated to be removed, will be paid for at the contract unit price each. Payment shall include removal and disposal of the stumps and roots.

When the Schedule of Items does not contain an estimated quantity for clearing, and it is not noted on the plans as incidental, the work, when authorized, will be paid for under the provisions of Section 109.3 - Extra Work.

When the use of herbicide or tree paint is required to complete the work included under this section, it will not be paid for directly, but will be considered as included in the other contract pay items.

Grubbing, when required, will be measured and paid for as provided in Section 203 - Excavation and Embankment.

Payment for removal of trees and stumps, not defined as contract pay items under Section 201.01d, shall be considered incidental to the contract and no separate payment will be made.

Removal of unsound and unsightly branches and trimming branches of trees, as specified in Subsection 201.03 - General, will be paid for under the provisions of Sections 109.03 - Extra Work or 631 - Equipment Rental.

Payment will be made under:

<u>Pay Item</u>	<u>Pay Unit</u>
201.11 Clearing	hectare [Acre]
201.12 Selective Clearing and Thinning [Acre]	hectare
201.23 Removing Single Tree Top Only	Each
201.24 Removing Stump	Each

SECTION 202 - REMOVING STRUCTURES AND OBSTRUCTIONS

202.01 Description This work shall consist of removing wholly or in part, and